DOCUMENT RESUME

ED 397 837 IR 018 025

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TITLE Integrated Research on Learning from Television.
PUB DATE 96
NOTE 6p.; In: Proceedings of Selected Research and Development Presentations at the 1996 National Convention of the Association for Educational Communications and Technology (18th, Indianapolis, IN, 1996); see IR 017 960.
PUB TYPE Information Analyses (070) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; Beliefs; Cognitive Processes; Comparative Analysis; Critical Viewing; Educational Technology; *Educational Television; Family Attitudes; Learning Activities; *Literature Reviews; *Mass Media; *Media Research; Programming (Broadcast); Research Methodology; Student Behavior; Teaching Methods; Television Viewing
IDENTIFIERS Professional Literature

ABSTRACT

This paper summarizes an integrated research study which was conducted of the literature on learning from mass media and instructional television. The body of literature reviewed encompasses 17,500 citations from the Educational Resources Information Clearinghouse (ERIC) and 1,882 citations from Psychological Abstracts. Major research areas identified were: message design and cognitive processing; school achievement; family viewing context; attitudes, beliefs, behaviors; programming and utilization; and critical viewing skills. An analysis and interpretation was done for each area. In analyzing the study as a whole, the paper compares: (1) research-based conclusions with general misconceptions; (2) research areas with specific variables addressed throughout the research; (3) identified dominant research methodologies in the various research areas; and (4) the relationship of instructional technology practitioners to applications of the research on learning from television. (SWC)

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ED 397 837

Title:

Integrated Research On Learning From Television

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IR018025

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The body of research literature on learning from film and television is voluminous. There are many documents which synthesize specific aspects of this literature, but none which cover both major streams of research, mass media and instructional television. This study reports a major synthesis effort that integrates both sources of research. The body of literature reviewed encompasses 17,500 citations from the Educational Resources Information Clearinghouse (ERIC) and 1,882 citations from Psychological Abstracts.

The methodology selected for this review is integrative research as described by Harris M. Cooper (1989). This methodology was selected because it enables the researcher to summarize past research by drawing conclusions from many separate and diverse studies. This method requires completing five stages in such a manner as to ensure that sources of invalidity are controlled.

The first stage is problem formulation in which definitions are formed which distinquish relevant and irrelevant studies. The major source of error at this stage is not starting broadly enough and focusing too early on narrow concepts and superficial details. The second stage is data collection in which sources of potentially relevant studies are identified. The main sources of invalidity at this stage are that studies and samples may differ from the target population, in the case the body of literature identified. The third stage is data evaluation in which criteria are formulated and applied to distinquish valid from invalid studies. At this point invalidity can arise from inclusion of studies with flawed research. The fourth stage, analysis and interpretation, deals with synthesizing the body of literature identified as representative and methodologically defensible. Invalidity can result from unwarranted inferences from extraneous data or variables or from synthesis assumptions that are wrong. The fifth stage is presentation which allows the researcher to use visuals to describe logical relationships across the data. The sources of error may include omission of review procedures or findings. The use of visuals and presentation strategies enhances the synthsizing process.

A comprehensive historical review of television research revealed two parallel strands which evolved separately. The first of these which was related to education and psychology began in the 1950's with comparative media research, evolved into media effects and individual differences and is represented today by research on interactions from viewer characteristics and television effects. The parallel strand originated during the 1960's in research related to mass media and social effects and formal features.

This historical review yielded the major categories of the television viewing system. This television viewing system concept was present in the literature as a way to explain the totality of the television viewing experience. Research evolved around the three components of this viewing system: programming, environment, and behavior. Figure 1, TV Viewing System, illustrates the components of the viewing and the research areas associated with each. The programing and environment components represent independent and mediating variables respectively; while behavior represents dependent variables.

See Appendix D of the *1996 AECT Proceedings*

Figure 1. TV Viewing System

After the literature was analyzed from the point of view of the television viewing system, a number of major research areas became apparent. These were:

- •message design and cognitive processing
- •school achievement
- •family viewing context
- •attitudes, beliefs, behaviors
- •programming and utilization
- •critical viewing skills.

The problem was reformulated as reviewing and synthesizing research in these areas.

The next step was data collection. Classic, representative, and pivotal studies in each area were identified through review books and documents, computerized searching, and indexing of relevant articles from journals in the field from the 1960's on. Original documents were obtained and studied. Extensive files in each area were organized, and cross referencing was done.

Each of the authors of this paper choose different areas in which to begin the next step, data evaluation. In addition to summarizing findings, each author was to identify methodological problems in individual studies and across the literature. Seriously flawed or inconsequential studies were withdrawn from the population of studies.

Several methodological problems were identified across the research areas. Operational definitions varied between psychologists and educators and even between individual psychologists or between individual educators.

Conclusions of laboratory studies were inferred to apply to realistic settings. Confounding variables in field and home settings were not controlled or in some cases even recognized. Different variables were studied at different ages which made comparison and synthesis impossible beyond one age level. There was an over-reliance on self-reporting methods throughout most of the research.

When data evaluation in each of the areas was complete, an analysis and interpretation was done for each area and then for the whole study. Conclusions for each area were summarized, and recommendations for future research were prepared. Then, the authors analyzed and interpreted the data of the whole study. To do this several assumptions were made:

- causality statements must be well-supported
- substantive conclusions from each area should remain separate
- methological conclusions from each area could be integrated, and
- graphic comparisons among areas would be helpful.

The authors began with group editing of the summaries and conclusions then proceeded to graphic comparison.

The first comparison was done by listing the research-based conclusions in one column and general misconceptions in the other column. The second comparison required a table which related the research areas with the specific variables addressed throughout the research. Table 1, Research Areas and Variables Addressed in Specific Areas, is the result of this comparison.

The next graphic comparison concerned the identification of dominant research methodologies in the various research areas. From this representation it is clear that certain methodologies have been heavily used to address a variety of research areas while other methodologies appear not to have been used in an area. The areas where these other methodologies have not been used may provide fruitful research opportunities which would strengthen the research in each area. Few research areas have benefited from the use of all methodological approaches. This comparison is shown in Table 2, Research Methodologies Employed in the Various Research Areas.

Variables	CATEGORIES					
	Cognitive Processing	School Achievement	Family Context	Socialization	Programming Utilization	Critical Viewing
Attention						
Comprehension						
Reading Ability						
Imagination						
Viewing Environment						
Coviewing						
Viewing Habits						
Attitudes						
Behavior						
Beliefs						
Programming						
Utilization						
Critical Viewing						

Table 1 Research Areas and Related Variables

Research Areas	METHODOLOGIES			
	Experimental	Qualitative	Descriptive	Developmental
Early Studies	■		■	
Message Design	■			■
Cognitive Processing	■			
School Achievement	■		■	
Imagination	■	■		
Viewing Environment		■	■	
Coviewing	■	■	■	
Viewing Habits	■	■	■	
Attitudes	■		■	
Beliefs	■		■	
Behavior	■	■	■	■
Programming	■		■	■
Utilization	■		■	
Critical Viewing			■	■

Table 2 Methodological Approaches and Research Areas

The last graphic technique used for synthesis was employed to identify the relationship of instructional technology practioners to application of the research on learning from television. The technique used was to separate in boxes the roles assumed and the tasks subsumed under role. This analysis is presented in Figure 2, Roles of the Instructional Technologist.

See Appendix D of the *1996 AECT Proceedings*

Figure 2. Roles of the Instructional Technologist

The last stage of the integrative research process was public presentation. The presentation of the findings highlighted selected conclusions in each of the major research areas: message design and cognitive processing, school achievement, family viewing context, attitudes, beliefs, and behaviors, programming and utilization, and critical viewing skills. The presentation included an explanation of the research process used in this study. In addition, methodological sources of error were identified and summarized. Future directions for research related to television effects were presented. These were:

- examine long term/cumulative effects
- conduct more naturalistic studies
- research effects of prosocial programming
- identify societal variables which interact with television effects
- encourage causal research related to television and behavior.

The complete results of the study will be published as Chapter 11, Research on Learning from Television in *Handbook of Research on Educational Communications and Technology* (in press).

References

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